

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanimoto et al (US Patent Application Publication No. 2003/0226370).

Regarding claim 1, Tanimoto et al discloses a refrigeration system (1, see paragraph [0031]) for a vapor compression refrigeration cycle including a heat source circuit (2, see paragraph [0031]) provided with a high temperature compressor (11, see paragraph [0032]) and a utilization circuit (3, see paragraph [0031]) connected to the heat source circuit and provided with an evaporator (56, see paragraph [0041]) and a low temperature compressor (55, see paragraph [0041]), the refrigeration system inherently comprising an operation control unit for switching the high temperature compressor between an actuated state and suspended state and an actuation control unit that actuates the low temperature compressor based on a refrigerant suction pressure is inherently present, as the system of Tanimoto et al is explicitly disclosed to switch between suspended and actuated or operating states based on pressure (40, 83, see paragraph [0032]; 55, see paragraph [0051]) and cannot change operation states of the various compressors without some operation or actuation control unit; and the actuation of the low temperature compressor will increase the suction pressure of the high temperature compressor (see figure 1). It is noted that Tanimoto does not explicitly disclose the method step of re-actuating the high temperature controller following the previously recited suspension of the high temperature compressor. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to program the controller and or actuator to then actuate the high temperature compressor, as the re-activation of the high temperature compressor when the inlet pressure reached an appropriate level would result in more efficient system operation.

Comment [F1]: The proposed rejection does not adequately address the limitation of "actuating the low temperature compressor to increase the refrigerant suction pressure of the high temperature compressor when the high temperature compressor is suspended and given conditions including a condition concerning a request for cooling in the evaporator are met and then actuating the high temperature compressor as claimed." Please reconsider as the sequence of starting of the two compressors under certain condition is not addressed and also a teaching reference for raising the suction pressure of the inlet of the high temp compressor is needed.

Response to Arguments

5. Applicant's arguments filed 1/29/2010 have been fully considered but they are not persuasive. The reasons are as follows.

The applicant argues on page 4 of the remarks that although it is true that Tanimoto must have some control means, it is not inherent that the control means would actuate a low temperature compressor to increase the refrigerant suction pressure of the high temperature compressor when the high temperature compressor is suspended and given conditions including a condition concerning a request for cooling in the evaporator are met, and then actuate the high temperature compressor. The examiner respectfully suggests that, although the method steps and their order within this apparatus claim are not inherent, they are certainly obvious, as is shown by the above rejection. The applicant is further respectfully reminded that the claim is a system claim, and not a method claim; as such, capability to carry out the method steps, not the actual occurrence of the method steps, is all that is required.

Comment [F2]: Please see comment above

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Takegami et al (US Patent Application Publication No. 2009/0120113) and Ueno et al (US Patent Application Publication No. 2009/0031737) disclose relevant systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXIS K. COX whose telephone number is (571)270-

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5530. The examiner can normally be reached on Monday through Thursday 9:00a.m. to 6:30p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules or Cheryl Tyler can be reached on 571-272-6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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